RYU.014

AMENDMENTS TO THE CLAIMS:

2

1. (Previously presented) An optical fiber preform from which an optical fiber is made by drawing, the optical fiber preform comprising at least one layer and having a maximum value V_0 [log(poise)] of a radial viscosity distribution which is greater than 7.60 [log(poise)] at a temperature T_s which is a temperature at which the maximum value V_0 [log(poise)] of radial viscosity distribution of the optical fiber in inside area is 7.60 [log(poise)] in inside and outside area equivalent to two times of mode field diameter on which light at wavelength of about

1385nm propagates through an optical fiber made by drawing the preform.

- 2. (Previously presented) An optical fiber preform as claimed in claim 1, wherein the preform includes a multi-layer structure comprising at least two clad layers including an inner clad layer having a first viscosity at a predetermined temperature and an outer clad layer having a second viscosity at said predetermined temperature, said second viscosity being greater than said first viscosity.
- 3. (Previously presented) An optical fiber preform as claimed in claim 2, wherein said inner clad layer comprises synthetic quartz glass and said outer clad layer comprises quartz glass containing crystal type silica.
- 4. (Previously presented) An optical fiber preform as claimed in claim 3, wherein said quartz glass containing crystal type silica as a high viscosity clad layer comprises native quartz or crystallization synthetic quartz glass.

RYU.014

5. (Previously presented) An optical fiber preform as claimed in claim 2, wherein said inner

3

clad layer comprises synthetic quartz glass having a lower viscosity than pure synthetic quartz

glass by being doped with at least one dopant selected from the group consisting of chlorine,

germanium, fluorine, and phosphorus, and said outer clad layer comprises synthetic quartz glass

having a higher viscosity than the inner clad layer by not being doped or doped with small

amount of dopant.

6. (Previously presented) An optical fiber preform as claimed in claim 1, wherein said

maximum value V₀ of said radial viscosity distribution is greater than 7.90 [log(poise)].

7. (Previously presented) An optical fiber preform as claimed in claim 1, wherein said at

least one layer comprises at least two layers including an inner clad layer and an outer clad layer

with high viscosity.

8. (Previously presented) An optical fiber preform as claimed in claim 1, wherein said at

least one layer comprises an outermost clad layer having a viscosity less than V_0 at the

temperature T_s.

9. (Original) An optical fiber preform as claimed in claim 1, wherein a surface of the

optical fiber preform has a viscosity at temperature T_s which is lower than V₀.

RYU.014

10. (Previously presented) An optical fiber preform as claimed in claim 1, wherein a portion

4

of said preform which includes at least a core and an inner clad layer is formed by one of vapor

axial deposition (VAD), outside vapor deposition (OVD), modified chemical vapor deposition

(MCVD), plasma chemical vapor deposition (PCVD), and a combination of any of these.

11-19. (Canceled).

20. (Previously presented) An optical fiber manufactured by heating and drawing a preform,

said preform including at least one layer and having a maximum value V₀ [log(poise)] of a radial

viscosity distribution which is greater than 7.60 [log(poise)] at a temperature T_s which is a

temperature at which the maximum value $V_0[log(poise)]$ of radial viscosity distribution of the

optical fiber in inside area is 7.60 [log(poise)] in inside and outside area equivalent to two times

of mode field diameter on which light at wavelength of about 1385nm propagates through an

optical fiber made by drawing the preform.

21. (Previously presented) An optical fiber as claimed in claim 20, wherein a transmission

loss at wavelength of 1385 nm is equal to or less than 0.36db/km.

22. (Previously presented) An optical fiber as claimed in claim 20, wherein a transmission

loss at wavelength of 1385 nm is equal to or less than 0.35db/km, in a case that said optical fiber

is exposed to atmosphere containing 1% hydrogen for four days.

RYU.014

23. (Previously presented) An optical fiber as claimed in claim 20, wherein a transmission

5

loss at wavelength of 1385 nm, in a case that the optical fiber is exposed to atmosphere

containing 1% hydrogen for four days, does not substantially change compared with

transmission loss at wavelength of 1385 nm before being exposed to the atmosphere.

24. (Previously presented) An optical fiber as claimed in claim 20, wherein said transmission

loss at a wavelength of 1385 nm is no greater than 0.30db/km.

25. (Previously presented) An optical fiber preform as claimed in claim 1, wherein said at

least one layer comprises:

an inner clad layer formed on a core and having a first viscosity at said temperature, T_s;

and

an outer clad layer formed on said inner clad layer and having a second viscosity at said

temperature, T_s, said second viscosity being greater than said first viscosity.

26. (Currently amended) An optical fiber preform as claimed in claim 25, wherein said core

comprises quartz guartz glass doped with germanium, such that said temperature T_s is about

1600 °C.

27. (Previously presented) An optical fiber preform as claimed in claim 25, wherein said at

least one layer further comprises:

another outer clad layer formed on said outer clad layer and having a third viscosity

which is lower than said second viscosity.

6

Serial No.: 10/634,779 Docket No. SH-0037US

RYU.014

28. (Previously presented) An optical fiber preform as claimed in claim 2, wherein a diameter of said inner clad layer is less than 80% of an outer diameter of said preform.

29. (Previously presented) A preform for an optical fiber, said preform comprising: a plurality of layers, a maximum value, V₀, of a radial viscosity distribution in said

plurality of layers being greater than 7.60 [log(poise)] at a temperature, T_s,

wherein T_s is a temperature at which the maximum value, $V_{0,}$ of radial viscosity distribution of an inside area of the optical fiber is 7.60 [log(poise)].

30. (New) An optical fiber preform as claimed in claim 1, wherein said at least one layer comprises:

an inner clad layer formed on a core and having a first viscosity at said temperature, T_s; and

an outer clad layer formed on said inner clad layer and having a second viscosity at said temperature, T_s ,

wherein said second viscosity is greater than said first viscosity,

wherein a diameter of said inner clad layer is less than 80% of an outer diameter of said perform, and

wherein a surface of the optical fiber preform has a viscosity at temperature T_s which is lower than V_0 .